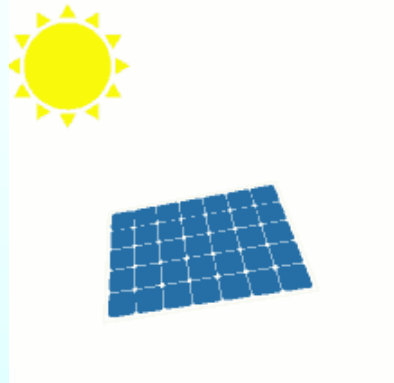# STAR DELTA TRANSFORMATION

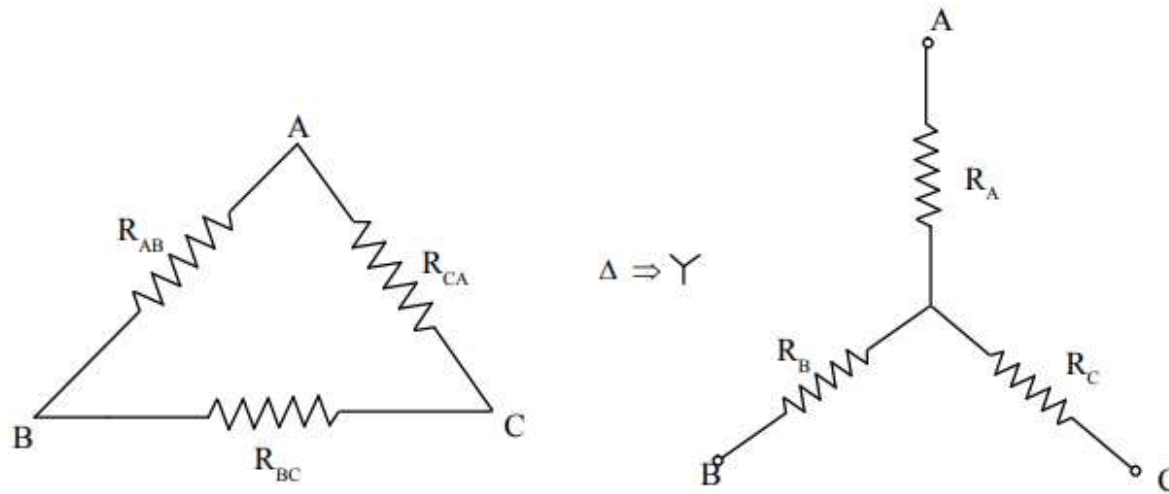*Rohini College of Engineering and Technology*

STAR DELTA TRANSFORMATION

To solve any complex network, the star delta transformation techniques is used. There are two types of network. They are :

1. Star (Y) network

2. Delta (Δ) network
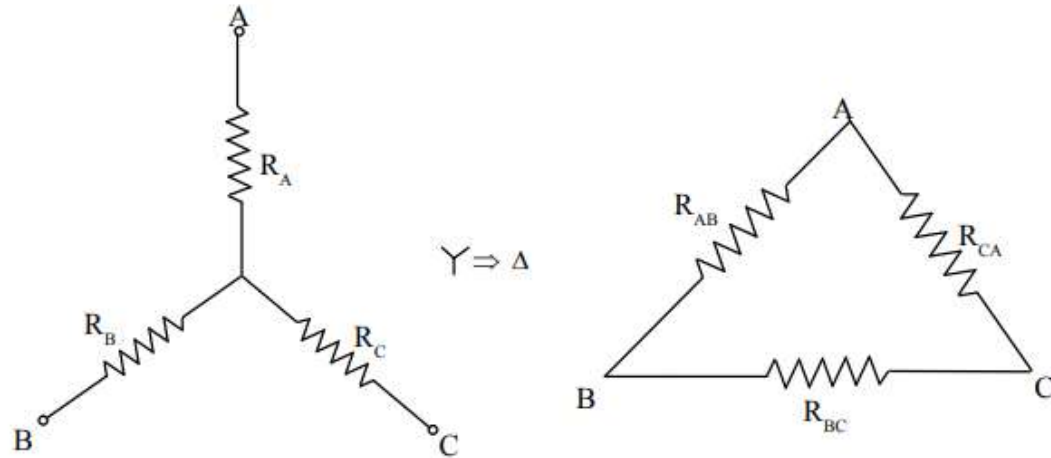
Delta to Star Transformation

$\Delta \Rightarrow Y$

$$R_A = \frac{R_{AB} \, R_{CA}}{R_{AB} + R_{BC} + R_{CA}}$$

$$R_B = \frac{R_{BC} \, R_{AB}}{R_{AB} + R_{BC} + R_{CA}}$$

$$R_C = \frac{R_{CA} \, R_{BC}}{R_{AB} + R_{BC} + R_{CA}}$$

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Star to Delta Transformation

$$\therefore \quad R_{AB} = \frac{R_A R_B + R_B R_C + R_C R_A}{R_C}$$

$$R_{BC} = \frac{R_A R_B + R_B R_C + R_C R_A}{R_A}$$

$$R_{CA} = \frac{R_A R_B + R_B R_C + R_C R_A}{R_B}$$

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Thank You